

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF THE CLAIMS:

Claim 1 (Original) A method of fabricating a microstructure comprising the steps of:

providing a structure comprising a multi-layered stack located atop an etchable material, said multi-layered stack comprising a core material including at least one diffusing element located between top and bottom diffusion barrier layers;

patterning the multi-layered stack to provide a plurality of patterned multi-layered stacks on the etchable material, each patterned multi-layered stack having etched facets;

heating the patterned multi-layered stacks to cause lateral diffusion of the at least one diffusing element to the etched facets;

removing the at least one diffusing element from the etched facets; and

performing a self-correcting dopant-sensitive etching process on a plurality of exposed patterned multi-layered stack to provide patterned lines that have a substantially reduced line width and substantially reduced line width variation.

Claim 2 (Original) The method of Claim 1 wherein said core material comprises a doped glass, doped silicon, or a doped polymer-based material.

Claim 3 (Original) The method of Claim 1 wherein the top and bottom barrier layers are the same or different and comprise a silicon nitride, a metal nitride or a metal oxynitride.

Claim 4 (Original) The method of Claim 1 wherein said patterning of the multi-layered stack includes photolithography and etching.

Claim 5 (Original) The method of Claim 1 wherein said heating is performed at a temperature of from about 100°C to about 1200°C.

Claim 6 (Original) The method of Claim 1 wherein the at least one diffusing element is removed from the etched facets by an evaporation process.

Claim 7 (Original) The method of Claim 6 wherein the evaporation process includes a gaseous phase about the structure.

Claim 8 (Original) The method of Claim 6 wherein the evaporation process is performed in the presence of a reactive ambient or a neutral ambient.

Claim 9 (Original) The method of Claim 1 wherein the at least one diffusing element is removed using a gettering material that is applied adjacent to the etched facets.

Claim 10 (Currently Amended) The method of ~~claim~~ Claim 1 further comprising a step of covering a subset of patterned features with a block mask to expose only a plurality of select lines, said covering step is performed between said removing and said self-correcting etching process.

Claim 11 (Original) The method of Claim 1 wherein the self-correcting etching removes highly doped patterned multi-layered stacks at a faster rate than lightly doped patterned multi-layered stacks.

Claim 12 (Original) The method of Claim 1 wherein the self-correcting etching removes wider patterned multi-layered stacks at a faster rate than narrower patterned multi-layered stacks.

Claim 13 (Original) The method of Claim 1 wherein the etchable material is a gate conductor.

Claim 14 (Original) The method of Claim 1 further comprising forming a diffusion barrier about each etched facet prior to performing the self-correcting etching process.

Claim 15 (Currently Amended) The method of ~~claim~~ Claim 1 further comprising performing an additional etching step after said self-correcting etching process, said additional etching step removes underlying etchable material.

Claim 16 (Currently Amended) The method of ~~claim~~ Claim 1 wherein the lateral diffusion has a characteristic diffusion length range from about one forth of the nominal line width to about the nominal line width.

Claims 17-20 (Cancelled)